

The opinion in support of the decision being entered today was *not* written
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GUY L. STEELE, JR.

Appeal 2007-2083
Application 10/035,584
Technology Center 2100

Decided: September 13, 2007

Before HOWARD B. BLANKENSHIP, ALLEN R. MACDONALD, and
COURTENAY, ST. JOHN, III, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1-37. We have jurisdiction under 35 U.S.C. § 6(b).

Appellant invented systems and methods for performing a floating point *remainder operations* with embedded status information associated with the floating point operand. (Specification [02]).

Representative independent claim 1 under appeal reads as follows:

1. A system for providing a floating point remainder, comprising:
 - an analyzer circuit configured to determine a first status of a first floating point operand and a second status of a second floating point operand based upon data within the first floating point operand and data within the second floating point operand respectively; and
 - a results circuit coupled to the analyzer circuit and configured to assert a resulting floating point operand containing the remainder of the first floating point operand and the second floating point operand and a resulting status embedded with the resulting floating point operand.

The Examiner rejected claims 1-37 under 35 U.S.C. § 103(a).

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Huang	US 5,995,991	Nov. 30, 1999
Nakano	US 5,065,352	Nov. 12, 1991

Claims 1-37 were also provisionally rejected in the Final Rejection under the judicially created doctrine of double patenting. The Answer does not expressly withdraw the rejection, but neither does it repeat it. *See Ex*

parte Emm, 118 USPQ 180, 181 (Bd. App. 1957) (rejection not referred to in the examiner's answer is assumed to have been withdrawn). We conclude that the double patenting rejection has been withdrawn.

Appellant contends that the claimed subject matter would not have been obvious. More specifically, Appellant contends Huang fails to disclose an embedded status because the tag of Huang is separate from the operand, and Nakano is not relied on by the Examiner to cure this deficiency. (Br. 8-12).

The Examiner contends that in Huang the "resulting status [is] embedded . . . within the resulting floating point operand." (Answer 5:4-5).

We reverse.

ISSUE(S)

Has Appellant shown that the Examiner has failed to establish Huang and Nakano suggest "a resulting floating point operand containing the remainder of the first floating point operand and the second floating point operand and a resulting status embedded within the resulting floating point operand" as required by claim 1?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

1. The prior art Huang patent describes that "If the generation of the result produces one of a predetermined set of special operands, a tag generator also generates a tag having a predetermined tag value corresponding to the produced special operand." (Col. 5, ll. 43-46).

2. The prior art Huang patent describes that the “each of the registers 116 and 118 has an operand value storage portion 116-1 and 118-1 and a tag value storage portion 116-2 and 118-2.” (Col. 6, l. 66 through col. 7, l. 2).

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S. Ct. at 1734, 82 USPQ2d at 1391 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 127 S. Ct. at 1741, 82 USPQ2d at 1396 (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)).

ANALYSIS

Appellant correctly points out the Examiner did not state a legally sufficient basis for the rejection because Huang does not embed the status in the operand. Contrary to the Examiner's contention (Answer 12) Huang does not teach that "the floating-point operand [is composed] of the associated tag and the floating-point value." Rather, Huang discloses that the tag stands separate from the operand. (FF 1 and 2). The Examiner has not provided an appropriate showing that the content of the prior art includes an operand with both a remainder (data) and an embedded status as required by claim 1.

On the record before us, it follows that the Examiner erred in rejecting claim 1 under § 103(a). Since claims 2-37 are analogous or narrower than claim 1, it also follows that those claims were not properly rejected under § 103(a) over Huang and Nakano.

CONCLUSION OF LAW

(1) Appellant has established that the Examiner erred in rejecting claims 1-37 as being unpatentable under 35 U.S.C. § 103(a) over Huang and Nakano.

(2) On this record, claims 1-37 have not been shown to be unpatentable.

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DECISION

The Examiner's rejection of claims 1-37 is Reversed.

REVERSED

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SUN MICROSYSTEMS/FINNEGAN, HENDERSON, L.L.P.
901 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20001-4413